Montana Fish, Wildlife & Parks

3201 Spurgin Road
Missoula, MT 59801
March 26, 1997

Governor's Office, Attn: Julie Lapeyre
Environmental Quality Council
Dept. of Environmental Quality, POB 200901, Helena, MT 59620-0901
Montana Fish, Wildlife & Parks
    Fisheries Division
    Region 2
    Endangered Species Coordinator
State Hist. Pres. Off., POB 201202, Helena, MT 50620-1202
MT State Lib., POB 201800, Helena, MT 59620-1800
MT Environmental Information Center, POB 1184, Helena, MT 59624
MT Audubon Council, POB 595, Helena, MT 59624
North Powell Consevation District, 91 North Frontage Road, Deer Lodge, MT 59722
Environmental Protection Agency, Federal Building, Helena, MT 59601
Army Corps of Engineers, 301 South Park Ave., Helena, MT 59601
U.S. Fish & Wildlife Service, 100 No. Park Ave., Helena, MT 59601
Western Montana "Fish & Game Assn. Box 4294, Missoula, MT 59806
Missoula Wildlife Assoc., 401 Burlington, Missoula, MT 59801
Big Blackfoot Chapter of T. U., POB 9237, Helena, MT 59639

Dear Ladies and Gentlemen:

The enclosed Environmental Assessment (EA) is submitted for your consideration. It was prepared for the proposed Future Fisheries Improvement project on Monture Creek. This project includes placing log veins, large woody debris, stems and root wads on the outside of stream bends. This work is intended to reduce erosion and increase scour which will produce pools with high quality cover. This work should provide critical bull trout staging areas, improve cutthroat habitat and provide critical over-winter habitat.

Questions and comments will be accepted until 5 p.m. May 1, 1997. If you have questions, feel free to contact me at (406) 444-2432. All comments should be sent to the undersigned.

Thank you for your interest.

Sincerely,

Ron Pierce

Ron Pierce
Fisheries
Region 2

Powell

Monture Creek EA Checklist

PART I. PROPOSED ACTION DESCRIPTION

1. Type of Proposed State Action Fish habitat and riparian restoration
2. Agency Authority for the Proposed Action Montana Fish, Wildlife and Parks
3. Name of Project Monture Creek Fish Habitat and Riparian Restoration Project

4. Name, Address and Phone Number of Project Sponsor (if other than the agency)
   Ron Pierce, 3201 Spurgin Rd. Missoula, MT. 59802 542-5532

5. If Applicable:

   Estimated Construction/Commencement Date August 1st 1997
   Estimated Completion Date September 1st 1997
   Current Status of Project Design (% complete) 90 %

6. Location Affected by Proposed Action (county, range and township)
   Powell County R13W T15N sec 12 to sec 27; stream mile 7.1 to 0.1

7. Project Size: Estimate the number of acres that would be directly affected that are currently:

   (a) Developed:
   residential...0 acres
   industrial....0 acres

   (b) Open Space/Woodlands/
   Recreation....0 acres

   © Wetlands/Riparian
   Areas.....0.5 acres

   (d) Floodplain...1.5 acres

   (e) Productive:
   irrigated cropland...0 acres
   dry cropland.....0 acres
   forestry.....0 acres
   rangeland.....0.5 acres
   other..... acres

8. Map/site plan: enclosed

9. Narrative Summary of the Proposed Action or Project including the Benefits and Purpose of the Proposed Action.

ENVIRONMENTAL ASSESSMENT:
MONTURE CREEK STREAM HABITAT ENHANCEMENT PROJECT

Background

Monture Creek, a fourth-order tributary to the middle Blackfoot River, originates in a roadless watershed bordering the western and southern flanks of the Bob Marshall Wilderness. It flows 24 miles, entering the Blackfoot River at river mile 44.2.

After leaving the mountains, the lower reaches of Monture Creek meander in a slightly entrenched channel confined by knob-and-kettle topography. Monture is a laterally moving sand, gravel and cobble bottom stream, characterized by point bars and a pool-riffle sequence in mid- to lower reaches. Rates of lateral movement are largely a function of riparian vegetation for this stream type. Streambanks are comprised of fine alluvial material making his channel type particularly susceptible to bank erosion.

Land uses along Monture Creek consist of primarily livestock production. Much of the riparian area in lower Monture Creek has been cleared, grazed intensively or damaged by livestock feeding; many of the large conifers from the lower riparian area have been harvested. These activities have impacted stream banks and reduced stream complexity in the lower 7 miles of stream (Fitzgerald, 1996).

A riparian health inventory of the lower 14 miles of Monture Creek was completed in 1996. Fitzgerald (1996) reported soils, vegetation and stream bank were generally healthy from stream mile 14 to 7.1 although isolated land clearing activities has accelerated lateral erosion in sections between stream mile 11.5 and 10.4. From stream mile 7.1 to the Monture Creek confluence, riparian health has declined with unhealthy and at risk ratings over most of the length of this reach.

Monture Creek supports rainbow/brown trout dominated fishery in the lower 5 miles of stream and a predominantly cutthroat/bull trout fishery above stream mile 5. Fluvial bull trout, cutthroat trout, rainbow trout and brown trout, and resident populations of brook trout, spawn in Monture Creek. The project area is a migratory corridor, rearing area and thermal refuge area for fluvial bull trout. Bull trout redd counts indicate Monture Creek supports a slightly higher level of bull trout spawning activity than the North Fork; however, densities for all Monture Creek juvenile bull trout are 55 % of the North Fork level (1.6 compared to 2.9 per 100 feet). The difference in reduced survival rates at early life stages due to higher sediment levels and reduced rearing habitat quality in areas affected by heavy historical grazing and timber removal practices.

Significant riparian management improvements have been completed in Monture Creek riparian corridors over the last 5 years. Completed projects include: 1) streambank livestock exclusion at the bull trout spawning areas; 2) erosion control projects; 3) development of riparian grazing systems; 4) offstream water

developments; 5) removal of winter livestock feedlot operations from the stream banks; 6) stream-side shrub plantings; 7)fish screening devices on irrigation ditches; and 7) stream habitat restoration in Monture Creek tributaries.

Although riparian management of Monture Creek has improved substantially, the quality of instream habitat is still considered marginal due to the lack of instream habitat features. Historical land use practices, primarily the harvest of old growth timber from the riparian area has resulting in poor recruitment of large woody debris to the stream. The result has been the loss of the instream structure, cover and pool habitat from the lower 7 miles of Monture Creek. Homogenous, low diversity habitat quality is characteristic of the project area. Low Native fish densities are the result of these habitat limitations.

Project Elements

This project includes instream habitat enhancement measures on 4.2 miles of Monture Creek (stream mile 0.0-1.7 and 4.5-7.0). The goals of the project are to: 1) improve and protect critical bull trout staging and rearing areas; 2) improve habitat conditions for all life-history stages of cutthroat trout; and 3)provide critical winter habitat for cutthroat trout as well as rainbow and brown trout.

This effort is a simple project using "soft" enhancement techniques. These include placing log veins and large woody debris, stems and rootwads on the outside corners of stream bends. These native materials will not only reduce the rate of lateral erosion but also provide the scour needed to form pools and other forms of high quality cover for a C3 to C4 "Rosgen" channel type. In addition, mature live willow clumps and sods will be placed on to the banks to provide additional bank stabilization, shade and cover for fish. Approximately 40 stream bends will enhanced. The project includes additional plantings of conifers and cottonwood trees along the corridor.

Project Benefits

Wild fish populations in the Blackfoot River are dependant upon Monture Creek for staging, reproduction and rearing of juvenile fish. Poor survival of juvenile rainbow and brown trout in the Blackfoot River in this vicinity is a suspected cause for low densities of adult fish in this river section. Cutthroat and bull trout, native to this river provide the best opportunity for improving fish populations in the middle portion of the Blackfoot River. Cutthroat are better adapted to the severe winter conditions in this reach of the Blackfoot River.

Cutthroat and bull trout require high quality tributary environments for life-stages from spawning to adult and especially for staging, reproduction, rearing and over-wintering. Monture Creek in the project area will provide these functions with habitat enhancement.

On site benefits include: 1) reduce the rates of lateral erosion of pastureland; 2)improved survival and recruitment of native fish species to the Blackfoot River; 2) increased opportunity to catch native fish like cutthroat in the Blackfoot River

and Monture Creek; 3)increased biodiversity of Blackfoot River fish populations; 4) increased numbers of cutthroat would benefit less skilled anglers because of greater catch ability; 5) help insure that tributary water quality (sediment) would not further degrade Blackfoot River water quality; and 6) reduce the need for more extreme native fish species management measures.

Project Scheduling
The project is expected to take 3 to 4 weeks for completion. The Project is scheduled for late summer 1997.

Project Scheduling
The project is expected to require 4 weeks for completion of construction. All project construction related to the stream channel work will be completed under the direct supervision of a fisheries biologist. Late summer of 1997 is the most likely starting time for construction.

10. Listing of any other Local, State or Federal agency that has overlapping or additional jurisdiction.

(a) Permits:

Agency Name	Permit	Date Filed/#
Montana Fish, Wildlife and Parks	SPA 124	Expected July 1, 1997

(b) Funding:

Agency Name	Funding Amount

Project Funding Sources

Source	**Amount**
Future Fisheries	$9,000
US Fish and Wildlife Service	$7,500
Big Blackfoot Trout Unlimited	$7,500
Two Creeks and Heart-Bar-Heart Ranches	$7,500
Total Project Cost	**$31,500**

© Other Overlapping or Additional Jurisdictional Responsibilities:

Agency Name	Type of Responsibility

11. List of Agencies Consulted During Preparation of the EA:
US Fish and Wildlife Service

PART II. ENVIRONMENTAL REVIEW

1. Evaluation of the Impacts of the Proposed Action Including Secondary and Cumulative Impacts on the Physical and Human Environment. Complete the following checklist, adding comments or narrative as necessary.

IMPACTS

PHYSICAL ENVIRONMENT	UNKNOWN*	NO IMPACTS	IMPACTS:* MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
1. LAND RESOURCES						
Will the proposed action result in:						
a. Soil instability or changes in geologic substructure?		X				
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil which would reduce productivity or fertility?		X				
c. Destruction, covering or modification of any unique geologic or physical features?		X				
d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?			X			X
e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?						
f. Other: _____						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

d. A temporary increase in stream turbidity will occur during project implementation.

IMPACTS

PHYSICAL ENVIRONMENT	UNKNOWN*	NO IMPACTS	IMPACTS:* MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
2. AIR						
Will the proposed action result in:						
a. Emission of air pollutants or deterioration of ambient air quality? (also see 13 (c))		X				
b. Creation of objectionable odors?		X				
c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?		X				
d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?		X				
e. *For P-R/D-J projects, will the project result in any discharge which will conflict with federal or state air quality regs? (Also see 2a)						
f. Other _____						

IMPACTS

PHYSICAL ENVIRONMENT

	UNKNOWN*	NO IMPACTS	IMPACTS:* MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
3. WATER						
Will the proposed action result in:						
a. Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?			X			X
b. Changes in drainage patterns or the rate and amount of surface runoff?		X				
c. Alteration of the course or magnitude of flood water or other flows?		X				
d. Changes in the amount of surface water in any water body or creation of a new water body?		X				
e. Exposure of people or property to water related hazards such as flooding?		X				
f. Changes in the quality of groundwater?		X				
g. Changes in the quantity of groundwater?		X				
h. Increase in risk of contamination of surface or groundwater?		X				
I. Effects on any existing water right or reservation?		X				
j. Effects on other water users as a result of any alteration in surface or ground-water quality?		X				
k. Effects on other?						

a) temporary increase in stream turbidity during project implementation.

IMPACTS

PHYSICAL ENVIRONMENT	UNKNOWN*	NO IMPACTS	IMPACTS:* MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
4. VEGETATION						
Will the proposed action result in:						
a. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?		X				X
Alteration of a plant ommunity?		X				X
c. Adverse effects on any unique, rare, threatened, or endangered species?		X				X
d. Reduction in acreage or productivity of any agricultural land?		X				
e. Establishment or spread of noxious weeds?		X				
f. **For P-R/D-J, will the project affect wetlands, or prime and unique farmland?						
g. Other: _____						

a)This project will improve diversity, productivity and abundance of plant species.

d)A rest-rotation grazing system and offstream watering has been implemented and will improve range productivity.

e)Disturbed sites will be immediately seeded with a competitive native grass mixture.

IMPACTS

PHYSICAL ENVIRONMENT	UNKNOWN*	NO IMPACTS	IMPACTS:* MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
5. FISH/WILDLIFE						
Will the proposed action result in:						
a. Deterioration of critical fish or wildlife habitat?		X				X
b. Changes in the diversity or abundance of game animals or bird species?		X				
c. Changes in the diversity or abundance of nongame species?						
d. Introduction of new species into an area?		X				
e. Creation of a barrier to the migration or movement of animals?		X				
f. Adverse effects on any unique, rare, threatened, or endangered species?		X				
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?		X				
h. **For P-R/D-J, will the project be performed in any area in which T&E species are present, and will the project affect any T&E species or their habitat? (Also see 5f)						
i. *For P-R/D-J, will the project introduce or export any species not presently or historically occurring in the receiving location? (Also see 5d)						
j. Other: _____						

This project will is a habitat enhancement project and will benefit species of special concern

IMPACTS

HUMAN ENVIRONMENT	UNKNOWN*	NO IMPACTS	IMPACTS:* MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
6. NOISE/ELECTRICAL EFFECTS						
Will the proposed action result in:						
a. Increases in existing noise levels?		X				
b. Exposure of people to serve or nuisance noise levels?		X				
. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?		X				
d. Interference with radio or television reception and operation?		X				
e. Other: _____						

IMPACTS

HUMAN ENVIRONMENT	UNKNOWN*	NO IMPACTS	IMPACTS:* MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
7. LAND USE						
Will the proposed action result in:						
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?		X				
b. Conflicted with a designated natural area or area of unusual scientific or educational importance?		X				
. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		X				
d. Adverse effects on or relocation of residences?		X				
e. Other: _____						

IMPACTS

HUMAN ENVIRONMENT	UNKNOWN*	NO IMPACTS	IMPACTS:* MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
8. RISK/HEALTH HAZARDS						
Will the proposed action result in:						
a. Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?		X				
b. Affect an existing emergency response or emergency evacuation plan or create a need for a new 'an?		X				
c. Creation of any human health hazard or potential hazard?		X				
d. *For P-R/D-J, will any chemical toxicants be used? (Also see 8a)						
e. Other: _____						

IMPACTS

HUMAN ENVIRONMENT	UNKNOWN*	NO IMPACTS	IMPACTS:* MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
9. COMMUNITY IMPACTS						
Will the proposed action result in:						
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		X				
b. Alteration of the social structure of a community?		X				
c. Alteration of the level or distribution of employment or community or personal income?		X				
d. Changes in industrial or commercial activity?		X				
e. Increased traffic hazards or effects on existing transportation facilities or atterns of movement of people and goods?		X				
f. Other: _____						

HUMAN ENVIRONMENT	UNKNOWN*	NO IMPACTS	IMPACTS:* MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
0. PUBLIC SERVICES/ TAXES/UTILITIES						
Will the proposed action result in:						
a. Will the proposed action have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify: _____		X				
b. Will the proposed action have an effect upon the local or state tax base and revenues?		X				
c. Will the proposed action result in a need for new ·cilities or substantial ,terations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?		X				
d. Will the proposed action result in increased used of any energy source?		X				
e. Other:_____						

IMPACTS

HUMAN ENVIRONMENT	UNKNOWN*	NO IMPACTS	IMPACTS:* MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
1. AESTHETICS/ RECREATION						
Will the proposed action result in:						
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?		X				
b. Alteration of the aesthetic character of a community or neighborhood?		X				
c. Alteration of the quality or quantity of recreational opportunities and settings?		X				
d. *For P-R/D-J, will any designated or proposed wild or scenic rivers, trails or wilderness areas be impacted? (Also see 11a, 11c)						
e. Other: _____						

This project will enhance esthetic and recreational values.

IMPACTS

HUMAN ENVIRONMENT	UNKNOWN*	NO IMPACTS	IMPACTS:* MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
2. CULTURAL/ HISTORICAL RESOURCES						
Will the proposed action result in:						
a. Destruction or alteration of any site, structure or object of prehistoric historic, or paleological importance?		X				
b. Physical change that would affect unique cultural values?		X				
c. Effects on existing religious or sacred uses of a site or area?		X				
d. ***For P-R/D-J, will the project affect historic or cultural resources? Attach SHPO letter of clearance. (Also see 12.a)						
e. Other: _____						

IMPACTS

SIGNIFICANCE CRITERIA	UNKNOWN*	NO IMPACTS	IMPACTS:* MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
3. SUMMARY EVALUATION OF SIGNIFICANCE						
Will the proposed action, considered as a whole:						
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on tow or more separate resources which create a significant effect when considered together or in total.)		X				
b. Involve potential risks or adverse effects which are uncertain but extreme-ly hazardous if they were to occur?		X				
c. Potentially conflict with the substantive require-ments of any local, state, or federal law, regulation, standard or formal plan?		X				
d. Establish a precedent or celihood that future actions with significant environmental impacts will be proposed?		X				
e. Generate substantial de-bate or controversy about the nature of the impacts that would be created?		X				

2. Description and analysis of reasonable alternatives (including the no action alternative) to the proposed action whenever alternatives are reasonably available and prudent to consider and a discussion of how the alternatives would be implemented:

a. No action alternative

This alternative would be implemented by not taking any actions on the proposed fish habitat restoration plan. The likely outcome of this alternative would be the acceptance of lost native fish species habitat, loss of improved recruitment to the Blackfoot River, loss of potential fishing opportunity on and off-site, additional siltation of downstream reaches.

3. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:

The preferred alternative is an enhancement effort. Past landuse actions have disrupted migrations and production of fish species.

4. Based on the significance criteria evaluated in this EA, is an EIS required? YES / NO If an EIS is not required, explain <u>why</u> the EA is the appropriate level of analysis for this proposed action:

The proposed action represents an enhancement in ecosystem components and the human environment. The positive corrective ure with minimal impacts make an EA the appropriate level of analysis.

5. Describe the level of public involvement for this project if any and, given the complexity and the seriousness of the environmental

issues associated with the proposed action, is the level of public involvement appropriate under the circumstances?

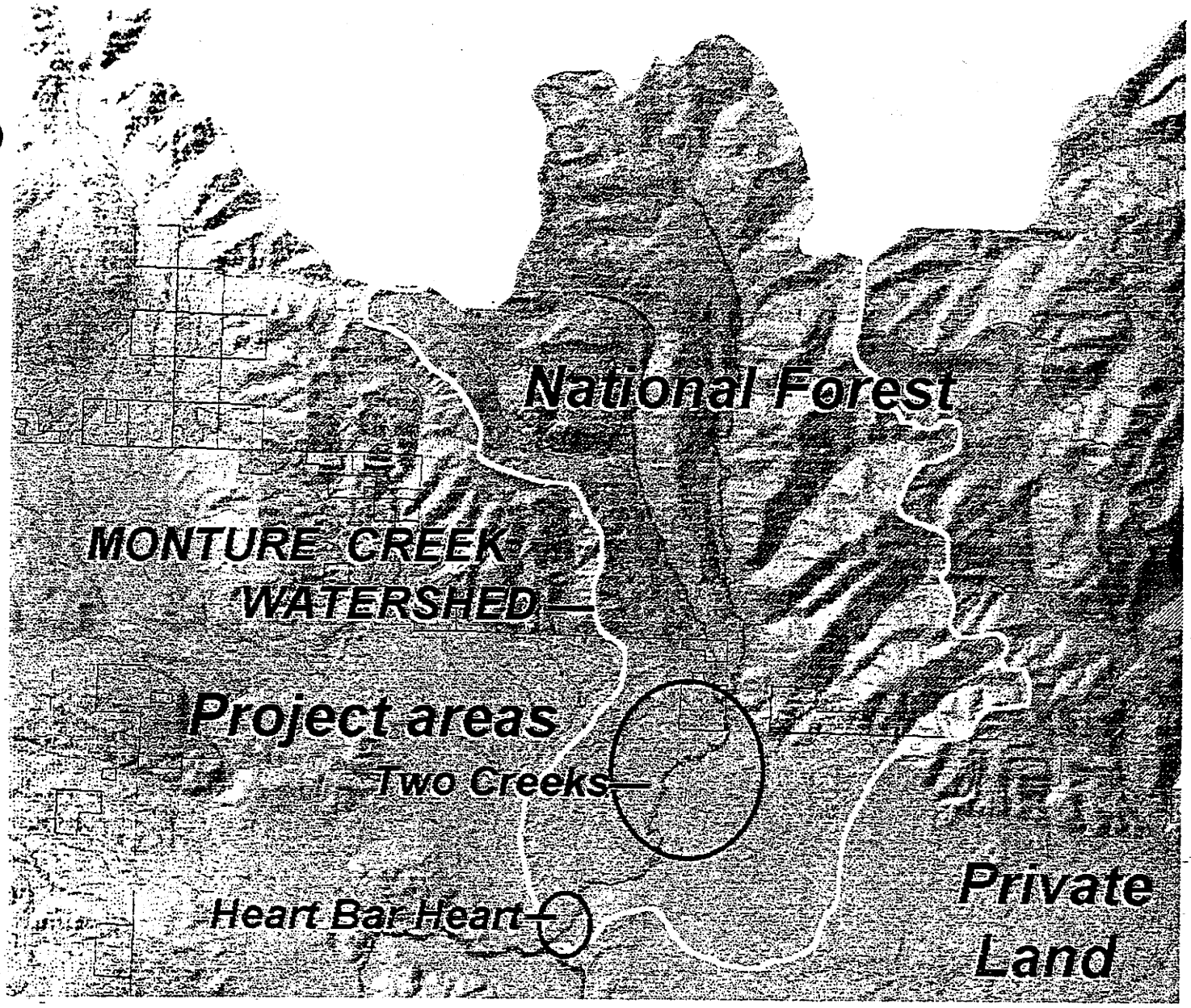
Only limited public involvement is planned. All actions have been approved by the lessee, the Department of State Lands, Montana Fish, Wildlife and Parks, USFWS and Conservation District. This project is consistent with other restoration efforts in the Blackfoot River Basin.

6. Duration of comment period if:

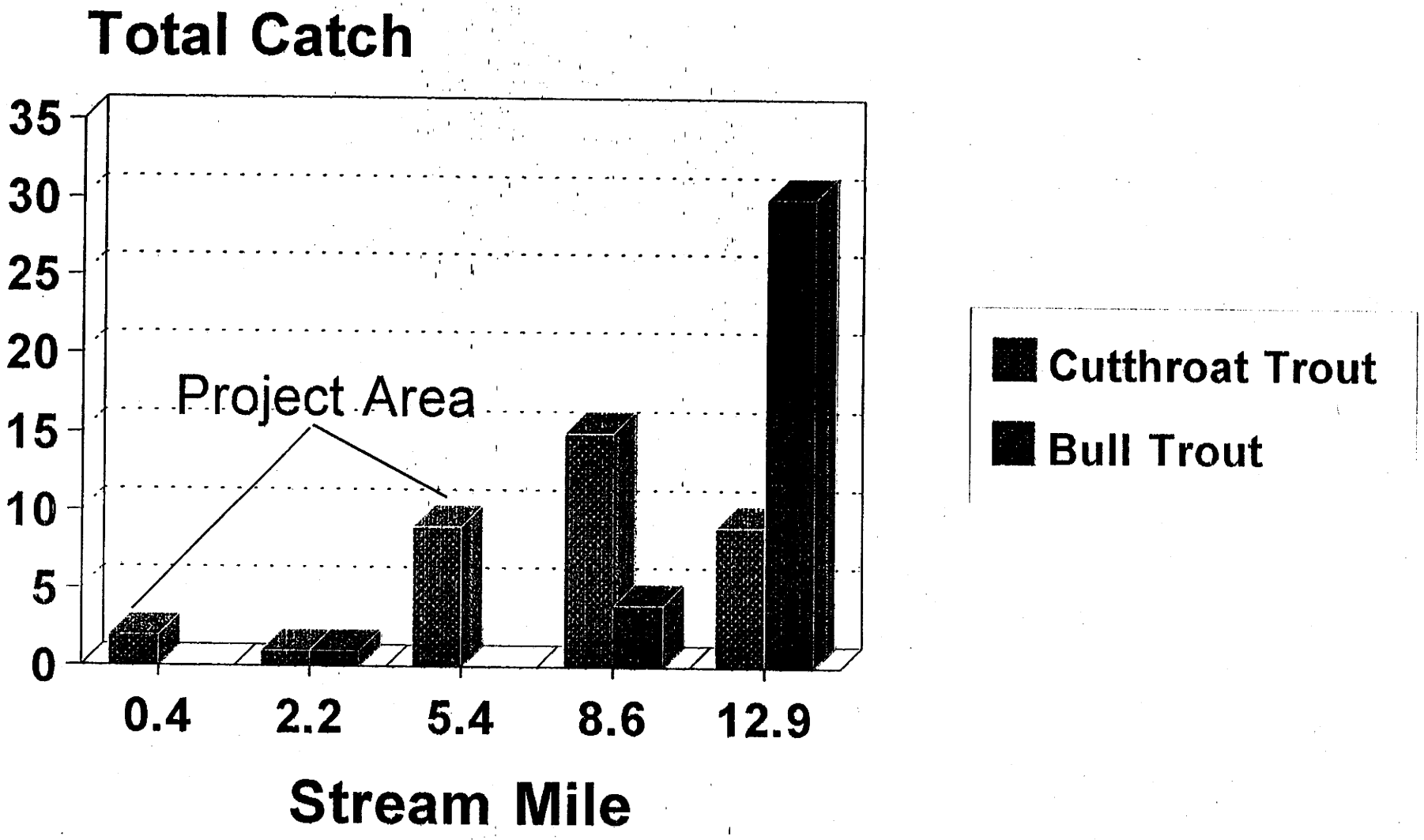
30 days

7. Name, title, address and phone number of the Person(s) Responsible for Preparing the EA:

Ron Pierce
Montana Fish, Wildlife and Parks
3201 Spurgin Rd.
Missoula, MT. 59801
406-542-5506


National Forest
MONTURE CREEK WATERSHED
Project areas
Two Creeks
Heart Bar Heart
Private Land

Electrofishing Catch for Native Fish in Five Sections of Monture Creek 1994



Based on a single electrofishing pass

Figure 1

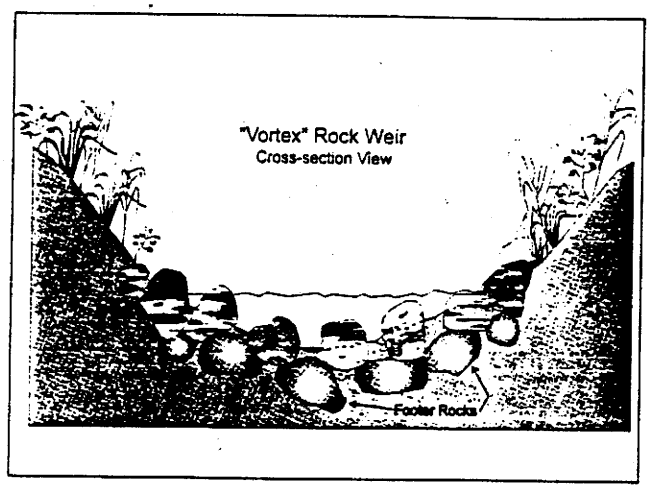


FIGURE 8-22. Vortex rock weir. (*Rosgen, 1993a*)

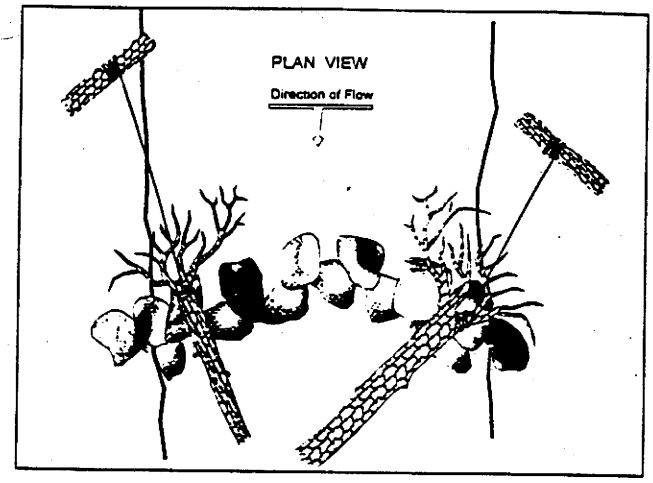


FIGURE 8-23. Modification of vortex rock weir to include "floating" log covers w/bank anchors. (*Rosgen, 1993a*)

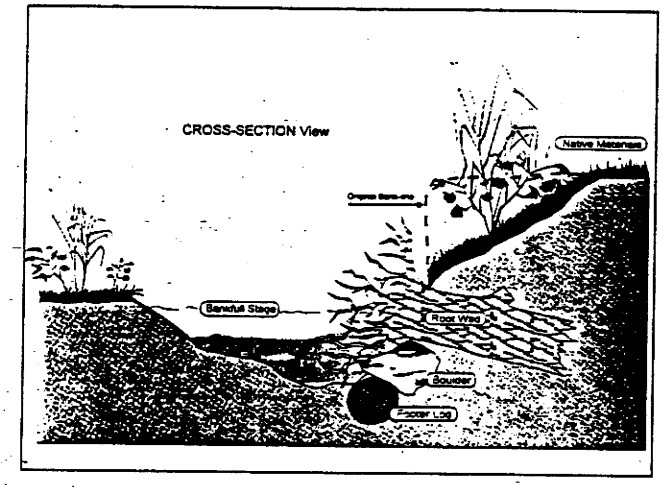


FIGURE 8-24. Native material bank revetment. (*Rosgen, 1993a*)

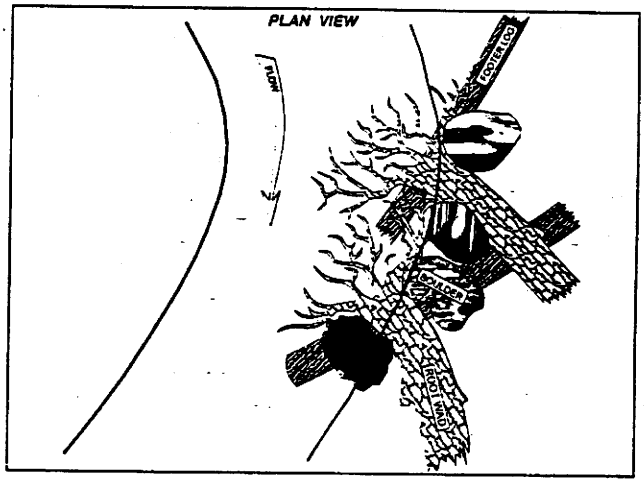


FIGURE 8-25. Native material bank revetment. (*Rosgen, 1993a*)

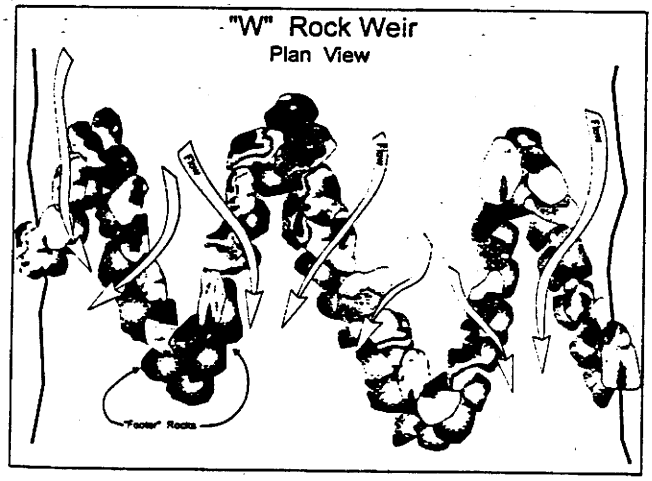


FIGURE 8-26. "W" rock weir. (*Rosgen, 1993a*)

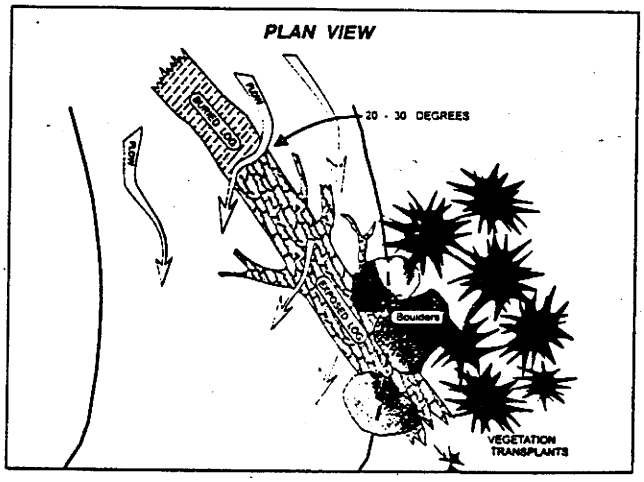


FIGURE 8-27. Log-spur bank feature. (*Rosgen, 1993a*)

Figure 2